



# Espresso Machine Operation Guide

## How to make espresso

1. Ensure that the machine is switched on, has a full water tank and is heated up – the portafilter should be left in the group head to ensure that it is warm.
2. Ensure that the filter basket is clean and dry before filling with coffee.
3. Fill the filter basket with finely ground coffee.
4. Using a tamper, compact the coffee evenly – usually the coffee will sit around 5mm under the rim of the filter basket after tamping.
5. Wipe any excess coffee grounds from the portafilter lugs and the rim of the basket.
6. Insert the portafilter into the group head and ensure that it seals – usually the handle will seal at a 6 o'clock angle.
7. Place a cup underneath the spout/s of the handle and turn on the brew button/lever.  
*It may help to use a small measuring glass when you are learning this technique so you can measure the exact quantity of your espresso shot.*
8. Once you have started brewing the coffee, there should be a 5-10 second wait before any espresso begins to extract. When the coffee begins to extract it should look dark, rich and syrupy.  
*For a single shot, the extraction should be 25 - 30ml pulled in 25 – 30 seconds*  
*For a double shot, the extraction rate should be 50 – 60ml pulled in 25 – 30 seconds*

*As a general rule, double shots are easier to make – single shots always have less cream and to achieve a good single shot, the technique must be perfect.*

*Double shots are more forgiving and generally taste better as they have more crema.*

**If the coffee takes more than 15 seconds to begin to extract, turn off the brew button/lever immediately to avoid damaging the machine internally.**

9. If the extraction rate is incorrect, use the 'Troubleshooting' guide to adjust your grind and dose.



## Troubleshooting

<b><i>Problem</i></b>	<b><i>Cause</i></b>	<b><i>Solution</i></b>
<i>Little or no coffee is extracting from the portafilter</i>	<ul style="list-style-type: none"> <li>- Coffee is ground too fine</li> <li>- Too much coffee in filter basket</li> </ul>	<ul style="list-style-type: none"> <li>- Use coarser grind (as a general rule, larger numbers on a grinder mean a coarser grind)</li> <li>- Use less coffee</li> <li>- Trial and error with these two variables may be required to achieve a good espresso</li> </ul>
<i>Coffee flows too fast from portafilter</i>	<ul style="list-style-type: none"> <li>- Coffee is ground too coarse</li> <li>- Not enough coffee in filter basket</li> </ul>	<ul style="list-style-type: none"> <li>- Use finer grind (as a general rule, smaller numbers on a grinder mean a finer grind)</li> <li>- Use more coffee</li> <li>- Trial and error with these two variables may be required to achieve a good espresso</li> </ul>
<i>Little or no crema</i>	<ul style="list-style-type: none"> <li>- Coffee is not fresh</li> <li>- Extraction rate is incorrect</li> </ul>	<ul style="list-style-type: none"> <li>- Purchase fresh beans (see '<i>What beans to use</i>' section)</li> <li>- Use the above troubleshooting information to ensure you are getting the correct extraction rate</li> </ul>
<i>The flow of coffee from the spouts is uneven</i>	<ul style="list-style-type: none"> <li>- The coffee distribution may have been uneven</li> <li>- The coffee may have been tamped unevenly</li> </ul>	<ul style="list-style-type: none"> <li>- Ensure that the coffee is evenly distributed in the basket as you fill it</li> <li>- Check that your tamping is even</li> </ul>

*If the above techniques are unsuccessful, please contact us for assistance.*



## How to steam milk

### *Quick Tips*

- Use fresh, cold milk
- Use a milk jug that is appropriately sized for the number of milk coffees you are preparing
  - E.g. use a 350ml jug for a single milk coffee, or a 600ml jug for 2 milk coffees.

### *Ideal Milk Temperature Guide*

<b><i>Milk Type</i></b>	<b><i>Ideal Temperature</i></b>	<b><i>Special Conditions/Requirements</i></b>
Full Cream	65°Celsius	Generally considered the easiest milk to texture.
Skim/Light/No fat	65°Celsius	Heats and stretches faster than full cream and separates quite quickly so is generally a little harder to work with. With practice, good results are achievable.
Soy	55-60°Celsius	Stretches a little slower than full cream, more sensitive to temperature. Will develop an unpleasant taste if overheated. With practice, good results are achievable.

1. **If your machine is a single boiler, turn on the steam button and wait 30 seconds before attempting the steps below to allow the machine to heat up enough to produce steam**
2. Using cold, fresh milk fill the milk jug to the bottom of the spout
3. Purge the steam wand until the steam is dry, not watery
4. Submerge the steam wand under the surface of the milk and turn on steam until the pressure causes the milk to swirl in the jug
5. Lower the milk jug to gently break the surface of the milk. It will make a slight sucking sound and this will create a creamy texture

*This process is called stretching and needs to be done right at the start of steaming the milk, while the milk is cold! Once the milk begins to warm, the proteins change and the milk can no longer be stretched effectively.*

6. After a few seconds of stretching, submerge the steam wand again to allow the milk to heat. Turn off the steam when the milk reaches ideal temperature (outlined above)
7. Leave the milk aside to allow any bubbles to rise to the surface.



8. Wipe the steam wand and purge any residual milk out of the tip to prevent blockages.
9. Tap the milk jug on the bench to pop any bubbles that have risen to the surface.
10. Swirl the milk around in big circles to blend the milk and foam together – the milk should look shiny and creamy, like wet paint.
11. Pour the milk into the cup on top of the espresso shot.
12. Discard any remaining milk as it won't be able to be properly frothed again after being heated once.
13. **If your machine is a single boiler, you must refill the boiler after steaming – please follow the 'Single boiler instructions' after steaming milk.**

## Troubleshooting

<b><i>Problem</i></b>	<b><i>Cause</i></b>	<b><i>Solution</i></b>
Milk has large, airy bubbles	<ul style="list-style-type: none"> <li>- Milk may have been stretched for too long</li> <li>- Milk may have been stretched when it was warm</li> </ul>	<ul style="list-style-type: none"> <li>- Ensure that the milk is only stretched for a few seconds</li> <li>- Make sure to only stretch milk while it is still cold</li> </ul>
Milk is not creamy	<ul style="list-style-type: none"> <li>- Milk may not have been stretched enough</li> <li>- Milk may have been overheated, causing foam to disintegrate</li> </ul>	<ul style="list-style-type: none"> <li>- Ensure that the milk is stretched for a few seconds as step 4 outlines above</li> <li>- Take care to only heat milk to the recommended temperature – see 'Quick Tips' section for ideal temperatures</li> </ul>
Milk has too much foam	<ul style="list-style-type: none"> <li>- Milk has been stretched too much</li> </ul>	<ul style="list-style-type: none"> <li>- Ensure that the milk is only stretched for a few seconds – excess foam can be spooned out of the jug before pouring if necessary</li> </ul>
Milk is too hot/cold	<ul style="list-style-type: none"> <li>- Milk has not been heated correctly</li> </ul>	<ul style="list-style-type: none"> <li>- Consider using a thermometer or other device to measure temperature and follow temperature guide as outlined in 'Quick Tips' section</li> </ul>

*If the above techniques are unsuccessful, please contact us for assistance.*



## Single boiler instructions

Single boiler machines are unable to produce steam and coffee at the same time. After using the steam function, the boiler must be primed to prevent damage.

- ***Never leave machine in steam mode for over 5 minutes***
- ***Never steam more than 3 milk coffees before re-priming the boiler***
- ***Re-prime the boiler immediately after using the steam function***

### How to re-prime the boiler

- After steaming the milk, turn off the steam button/switch
- Place a jug or container under the steam wand
- Turn on the water button/switch – you will hear the pump turn on
- Open the steam knob/lever
- Release all of the steam until there is a strong flow of water coming out
- Turn off the steam knob/lever and the water button/switch
- The boiler is now refilled – at this point you can go back to making coffees, leave the machine sitting idle or turn off the machine

*Failure to perform the above procedure may result in damage to the machines boiler and element. This type of damage is not covered by warranty.*

*If you have any hesitations or questions about this procedure, please call us.*



## How to descale your espresso machine

*Espresso machines need to be descaled periodically if filtered, softened water is not used to prevent calcification of the inside of the machine. If you would like to investigate filtration options, contact us.*

*Machines that have not been used with filtered, softened water should be descaled once every 3-6 months, depending on the degree of hardness of local water.*

1. Use a specialised espresso machine descaling liquid or powder to descale the machine – home-made solutions generally have the ability to lift scale, but are not strong enough to dissolve scale, which can cause damages and blockages inside the machine.
2. Use the recommended dose of descaler and run through the machine in accordance with the instructions provided with the product and/or machine manufacturers instructions.

*Ensure that the machine is on and fully heated when descaling.*

3. Wash out the water tank to remove any residual product and refill with fresh, cold water.
4. Flush a whole tank of fresh water through the machine to remove any remaining descaler and repeat if necessary.

*Do not leave your machine unattended whilst descaling to prevent any accidents or damage to the machine if there is not automatic low water cut-off function.*

5. Make an espresso shot and discard to re-season the machine.



## How to backflush your espresso machine

### ***What you will need***

- Espresso Machine Cleaning Powder or Tablets
- Group Head Cleaning Brush
- Blind Filter

### ***Every few days***

1. Make sure that the machine is on and fully heated. It is best to perform a backflush after making coffees before the machine is switched off. Use caution when backflushing to prevent burns from the hot water.
2. Use a group head cleaning brush to remove any coffee particles from the group head and shower screen.
3. Remove filter basket and replace with blind filter – you may want to use a spoon to lever out the filter basket as it can be very hot.
4. Place the portafilter in the group head without sealing and turn on the brew button/lever until water flows over the edges of the portafilter. Turn off the brew button/lever.
5. Empty the blind filter – you may see coffee particles in the water.
6. Place the portafilter in the group head, this time ensuring that it is sealed.
7. Turn on the brew button/lever and wait for 5 seconds, or until the pressure gauge peaks. Turn off the brew button/lever.
8. Repeat step 7 five times – there is no need to remove the handle and empty water between flushes.
9. Take off portafilter and empty the water from the blind filter.
10. Complete the steps below every 1-4 weeks, depending on frequency of use of the machine.

### ***Every few weeks***

1. After completing the above steps place 1 dose of either an espresso machine cleaning powder or tablet in the blind filter (refer to product instructions for exact quantity).
2. Place portafilter in the group head, ensuring that it is sealed.
3. Turn on the brew button/lever and wait for 5 seconds, or until the pressure gauge peaks. Turn off the brew button/lever.
4. Repeat step 3 twice, or until you can see traces of the cleaning product in the drip tray.
5. Wait for around 2 minutes and at every 30 second interval, repeat step 3.
6. Remove the group handle and empty the blind filter – you may see coffee particles and oils in the water.
7. Reattach portafilter, ensuring that it is sealed and repeat step 3 ten times. There is no need to remove the handle between flushes or to wait in between each flush.
8. Remove the handle and check that there are no traces of the cleaning product left in the portafilter – if you can see or smell cleaner still, repeat step 3 until the water runs clear.
9. When the water runs clear, empty and remove the blind filter.
10. If there is coffee built up on the portafilter and filter basket, you may want to soak them in some hot water with either some espresso machine cleaning powder or detergent. This will sanitise and degrease the handle.



## **How to clean your steam wand**

1. If there is a build up of dried milk on the wand or if the steam tip is blocked by milk, you should soak it with a special steam wand cleaning product.
2. Using a jug or container or jug of hot water, dispense the recommended amount of product into the water and place steam wand in solution for around 10 minutes, or until the build up is cleared.
3. If the wand is blocked, using a needle or toothpick may be necessary to remove the blockage.
4. Ensure that the machine is on and fully heated when using these products and don't leave the machine unattended whilst cleaning the steam wand.
5. To prevent excess build up from occurring, wipe the steam wand with a warm, damp cloth after steaming milk and purge the wand to prevent blockages.

## **Machine Maintenance and Servicing**

If your machine is not operating satisfactorily, call us with a description of the symptoms and we will determine whether the machine needs to be serviced.

We recommend that you have your espresso machine services every 12-18 months to maintain optimal performance and lengthen the life of the machine.